REMARKS

In the Office Action mailed April 27, 2005, claims 1-32 are pending in the

application. Claims 1-16 are rejected under 35 U.S.C. § 101 because the claimed

invention is directed to non-statutory subject matter. Claims 1-32 are rejected under 35

U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out

and distinctly claim the subject matter which applicant regards as his invention. Claims

1-32 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Sankaranarayan.

Claims 1-32 are pending. Claims 1, 14-16, 17, and 30-32 have been amended. No

claims have been added. Applicant submits that the amendments do not add new

matter.

35 U.S.C Section 101 Rejection

In the Office Action, the Examiner rejected claims 1-16 because the claimed

invention is directed to non-statutory subject matter.

In regards to claim 1, the Office Action states:

> "As per claim 1, the claimed 'storing list,' and 'creating tree of relationship' is non-statutory as not being tangibly embodied in a manner to be executable. The storing list of resources (whether physical or virtual), and/or creating tree of relationships for the parent and child objects are contained entirely within software."

In order for a computer process to be statutory, the claimed process must be

limited to a practical application of the abstract idea or mathematical algorithm in the

technological arts. The invention must produce a "useful, concrete, and tangible

result." (MPEP ¶ 2106).

Independent claim 1 includes the limitation of "creating a tree of relationships." The independent claim 1 clearly defines distinctive steps to generate a new entity to solve a resource contention problem well known in the art, by compiling a single entity that is a record of the relationship between physical and virtual resource objects and parent and child objects within the computer system. The tree of relationships is clearly a useful and tangible result. Therefore, the independent claim 1 contains a statutory process, and the statutory requirements are satisfied.

In addition, in reviewing claims, the Examiner should review the complete specification, including the detailed description of the invention, any specific embodiments that have been disclosed, the claims and any specific, substantial, and credible utilities that have been asserted for the invention. (MPEP ¶ 2106). Applicants submit that the independent claim 1 is fully disclosed in the specification. For example, in paragraph 13, in one embodiment, a global resource namespace is built from a list of parent-child object relationships. In paragraph 24, in one embodiment, the global resource namespace is further identified as a tree structure. By examining the various parent-child relationships and their associated physical and virtual resources in the global resource namespace, an entity responsible for system resource management can determine how the various system resources are being consumed and balance the net available parent resources globally, as well as across the individual child consumers. Therefore, an embodiment of the present invention clearly produces a useful, concrete, and tangible result.

In the same manner as claim 1, independent claim 14 clearly defines distinctive steps to generate a new entity to solve a resource contention problem well known in the art, by compiling a single entity that is a record of the relationships between available and consumed resources. Therefore, the independent claim 14 contains a statutory process, and the statutory requirements are satisfied.

In the Office Action, the Examiner stated that both claim 1 and claim 14 are "non-statutory as not being tangibly embodied in a manner as to be executable." As discussed above, both independent claims 1 and 14 clearly disclose distinctive steps to produce new, useful, and tangible results. When a computer program is claimed in a process where the computer is executing the computer program's instruction, the Examiner should treat the claim as a process claim. (MPEP ¶ 2106). The claim preamble must be read in the context of the entire claim. The determination of whether preamble recitations are structural limitations or mere statements of purpose or use can be resolved only on review of the entirety of the record to gain an understanding of what the inventors actually invented and intended to encompass by the claim. (MPEP ¶ 2111.02). As discussed above, Applicants respectfully submit that independent claims 1 and 14 satisfy the statutory requirements of 35 U.S.C. § 101.

Even so, Applicants have amended Claim 1 and 14 to specify the method is a "computer-implemented method." Applicants respectfully submit that based on this, the claims cover patentable subject matter.

Therefore, independent claims 1 and 14 are patentable under 35 U.S.C. § 101. Dependent claims 2-13 depend on independent claim 1, and dependent claims 15-16

depend on independent claim 14. These dependent claims thereby include the limitation of the associated independent claims and are patentable under 35 U.S.C. § 101.

Accordingly, Applicants respectfully submit that the rejections under 35 U.S.C. § 101 have been overcome by the remarks and amendments and withdrawal of these rejections is respectfully requested.

35 U.S.C Section 112 Rejection

Claims 1-32 were rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which the applicant regards as his invention.

The office action states:

> "As to claim 1, the claim recites 'physical resource objects' and 'virtual resource objects,' however, the claims recite the limitation 'the physical and virtual resource' in line 5-6. There is insufficient antecedent basis for this limitation in this claim."

Applicant has amended "the physical and virtual resources" of independent claim 1 (and independent claim 17) to "the physical and virtual resource objects" to provide sufficient antecedent basis.

The office action states:

> "Additionally, the last step of 'creating a tree structure for the parent and child objects and the physical and virtual resources' is confusing. It is unclear 'the tree relationship' is between what elements."

Applicant has amended independent claim 1 (and independent claim 17) to

clarify the tree relationship between the elements.

The office action states:

> "In claim 14, the statement 'tracking relationship among producers and consumers' is confusing. The words 'producer' and 'consumer' is singled out and does not have any relationship with other elements of the claim."

Applicant has amended "producers" and "consumers" in independent claim 14

(and claim 30) (as well as in dependent claims 15-16 and 31-32) to "resource producers"

and "resource consumers" to clarify the relationship of these elements with the other

elements of these claims.

Applicant respectfully submits that independent claims 1, 14, 17, and 30 are in

condition for allowance. Dependent claims 2-13 depend on independent claim 1,

dependent claims 15-16 depend on independent claim 14, dependent claims 18-29

depend on independent claim 17, and dependent claims 31-32 depend on independent

claim 30. These dependent claims thereby include the limitation of the associated

independent claims and are in condition for allowance.

35 U.S.C. Section 103 Rejection

Claims 1-32 are rejected under 35 U.S.C. § 103(a) as being unpatentable over

Sankaranaryan et al. (US Pat. No. 6,799,208, hereinafter "Sankaranaryan"). It is

submitted that claims 1 and 14 are patentable over Sankaranaryan.

The office action states, in part:

"As to claims 1, 14, Sankaran teaches the invention as claimed including, method, comprising: storing a list of physical resource objects (col. 8, lines 1-9); storing a list of virtual resources (col.), lines 10-17); storing a list of parent and child objects (Fig. 2, 32(1), ...32(A), and 104(1) ...104(p)); and creating a tree of relationship for the parent and child objects and the physical and virtual resources (Fig. 17, 1700).

Sankaran, even though teaches of relating the tree structure of the resource to particular condition based on availability of the resource to notify the resource providers (see Fig. 17, and col. 9, lines 19-49) but does not clearly and explicitly explain the tree relationship for the parent and child objects (producer and consumer), and the physical and the virtual (available and consumed resources). However, **it is obvious for one ordinary skill in that art t the time the invention was made to make a data structure relating to who are the producers and consumers of the resources, and what amount of resources are available or in use any time**. For the reason to have a bookkeeping method and be able to utilize the resources efficiently."

(Office Action 04/27/2005, pp 4)(emphasis added).

Applicants respectfully disagree with the Office Action's characterization of

Sankaranaryan. The "data structure" and resource manager mentioned in

Sankaranaryan differ from the instant application, as explained by the following.

Sankaranaryan teaches a system wherein a configuration which resides within an

individual "activity" or "task being performed" (see Sankaranaryan col. 9, lines 7-18)

serves as the root of a tree: "in the tree metaphor, the configuration 124 can be thought

of as a root of the descriptor tree." (see Sankaranaryan col. 10, lines 16-21).

In addition, Figure 17 presents a flow chart which illustrates an error handling

method. The supporting disclosure for Figure 17 suggests that the resources be

regarded as a tree structure only for the purpose error handling. (see Sankaranaryan,

col. 26, lines 50-55). Sankaranaryan again teaches using the "configurations" within an

"activity" as the root of this tree. (see Sankaranaryan col. 23, lines 11-16). **Nothing in**

Sankaranaryan teaches a single tree data structure that relates the resource relationship of producers and consumers in order to manage those resources.

Furthermore, Sankaranaryan teaches a processor wherein the resource manager is part of the kernel, at the lowest level of the operating system. (see Sankaranaryan Fig. 1, 30 and 40, and Sankaranaryan Fig. 2). **Nothing in Sankaranaryan teaches a computer system where the resource manager is integrated into a multifunction chipset.**

Applicant respectfully submits that claims 1 and 14 are in condition for allowance. Dependent claims 2-13 depend on independent claim 1 and dependent claims 15-16 depend on independent claim 14. These dependent claims thereby include the limitation of the associated independent claims and are also in condition for allowance. In addition, applicant respectfully submits that claims 15-32 are allowable for the same reasons as claims 1-14.

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No. 02-2666.

Respectfully submitted,

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Dated: _____10-27-05_____   _____
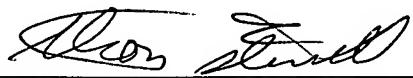
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